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- (21) International Application Number: PCT/US00/31483 (74) Agent: BRODOWSKI, Michael, H.: Testa, Hurwitz & Thibault, LLP, High Street Tower, 125 High Street, Boston, MA 02110 (US).
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- (71) Applicant: MATRITECH, INC. [US/US]: 300 Nevada Street, Newton, MA 02460 (US).

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(54) Title: METHODS AND COMPOSITIONS FOR DETECTION AND TREATMENT OF BREAST CANCER, BASED ON BREAST CANCER-ASSOCIATED POLYPEPTIDES

(57) Abstract: The invention provides a wide range of methods and compositions for detecting and treating breast cancer in an individual. Specifically, the invention provides target breast cancer-associated proteins, which permit a rapid detection, preferably before metastases occur, of breast cancer. The target breast cancer-associated protein may be detected, for example, by reacting the sample with a labeled binding moiety, for example, a labeled antibody capable of binding specifically to the protein. The invention also provides kits useful in the detection of breast cancer in an individual. In addition, the invention provides methods utilizing the breast cancer-associated proteins either as targets for treating breast cancer or as indicators for monitoring the efficacy of such a treatment.

INTERNATIONAL SEARCH REPORT

International Application No
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A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C07K14/47 C07K16/30 G01N33/574 C12Q1/68		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 C07K G01N C12Q		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) MEDLINE, CHEM ABS Data, BIOSIS		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DATABASE CHEMABS 'Online! CHEMICAL ABSTRACTS SERVICE, COLUMBUS, OHIO, US; BAZEL, SHAMIDEH ET AL: "Characterization of purified cathepsin D from malignant, human breast tissue" retrieved from STN Database accession no. 130:334429 CA XP002166729 & INT. J. ONCOL. (1999), 14(2), 315-319, 1999, abstract	1
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.		
<input checked="" type="checkbox"/> Patent family members are listed in annex.		
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family		
Date of the actual completion of the international search 18 September 2001		Date of mailing of the international search report 05/10/2001
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016		Authorized officer Masturzo, P

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/31483

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication where appropriate, of the relevant passages	Relevant to claim No.
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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/31483

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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X	WO 98 42725 A (MUSC FOUNDATION FOR RESEARCH DEVELOPMENT) 1 October 1998 (1998-10-01) page 16, line 32 - line 35	1
X	EP 0 460 607 A (BRISTOL-MYERS SQUIBB CO.) 11 December 1991 (1991-12-11) claim 27	1

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

Continuation of Box I.1

Although claims 34-40 and 43-62 (at least partially) are directed to a diagnostic method practised on the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition. Although claims 25-26 and 32-33 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.

Continuation of Box I.2

Claims Nos.: 1-62

Due to the very generic characterization of the claimed product, which involves unclarity of the whole subject matter of the present application, the search has been performed generally on the breast cancer antigen with molecular weights corresponding to those claimed in claim 1 and dependent products and methods.

The applicant's attention is drawn to the fact that claims, or parts of claims, relating to inventions in respect of which no international search report has been established need not be the subject of an international preliminary examination (Rule 66.1(e) PCT). The applicant is advised that the EPO policy when acting as an International Preliminary Examining Authority is normally not to carry out a preliminary examination on matter which has not been searched. This is the case irrespective of whether or not the claims are amended following receipt of the search report or during any Chapter II procedure.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 00/31483

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